

IN THE CLAIMS

Upon entry of the present amendment, the status of the claims will be as is shown below. This listing of claims replaces all previous versions and listings of claims in the application.

1. (Original) A diaphragm device of a lens for a CCTV camera, comprising:
 - a lens barrel;
 - a diaphragm;
 - a base plate which supports said diaphragm;
 - a diaphragm driver for driving said diaphragm to adjust a size of an aperture formed by said diaphragm;
 - an optical filter; and
 - a filter driver for moving said optical filter into and out of an optical path of said lens;
 - wherein each of said diaphragm and said optical filter lies on a corresponding surface of said base plate; and
 - wherein said diaphragm, said base plate, said diaphragm driver, said optical filter, and said filter driver are provided in said lens barrel.

2. (Currently Amended) The diaphragm device according to claim 1, further comprising:

a filter supporting plate having two apertures, said optical filter being fixed to said filter supporting plate so as to cover at least one of said two apertures;

wherein said diaphragm comprises a pair of blades which overlap each other;

wherein said pair of blades lie on a first surface of said base plate;

wherein said filter supporting plate lies on a second surface of said base plate; and

wherein said filter driver moves said filter supporting plate so that said two apertures are selectively positioned in said optical path.

3. (Original) The diaphragm device according to claim 1, wherein said filter driver comprises a lock mechanism which locks said optical filter at an advanced position and a retracted position when said filter driver moves said optical filter into and out of said optical path, respectively.

4. (Original) The diaphragm device according to claim 2, wherein said filter driver comprises a latch mechanism which positions said filter supporting plate at an advanced position and a retracted position when said filter driver moves said optical filter into and out of said optical path, respectively.

5. (Original) The diaphragm device according to claim 1, wherein said optical filter comprises an infrared absorbing filter which absorbs light in an infrared region.

6. (Currently Amended) The diaphragm device according to claim 2, further comprising:

at least one second optical filter which is fixed to at least one of said pair of blades so as to cover said aperture formed by said pair of blades of said diaphragm.

7. (Original) The diaphragm device according to claim 6, wherein each of said at least one second optical filter comprises an ND filter.

8. (Original) The diaphragm device according to claim 7, wherein said ND filter comprises spectral transmittance characteristics wherein a transmittance of said ND filter for light in an infrared region is one of substantially identical to and less than a transmittance of said ND filter for visible light.

9. (Original) The diaphragm device according to claim 7, wherein said ND filter comprises spectral transmittance characteristics so as to filter out light in an infrared region.

10. (Original) The diaphragm device according to claim 5, wherein said infrared region ranges from approximately 700 to 1000 nanometers.

11. (Original) The diaphragm device according to claim 8, wherein said infrared region ranges from approximately 700 to 1000 nanometers.

12. (Currently Amended) The diaphragm device according to claim 9, wherein said ~~the~~ infrared region ranges from approximately 700 to 1000 nanometers.

13. (Original) The diaphragm device according to claim 7, wherein a surface of said ND filter has a reflectivity which is one of equal to and less than approximately two percent.

14. (Original) The diaphragm device according to claim 7, wherein said ND filter is made of a resin base on which multi-metal layers are formed by evaporating a metal onto said resin base.

15. (Original) A diaphragm unit provided in a lens barrel of a CCTV surveillance camera, comprising:

a base plate having a plane portion on which an image-forming aperture is formed;

a filter supporting plate which is held by one of front and rear surfaces of said base plate to be movably guided on and along said one of said front and rear surfaces, said filter supporting plate having two apertures which are selectively positioned to align with said image-forming aperture;

an infrared absorbing filter fixed to said filter supporting plate so as to cover one of said two apertures;

a pair of diaphragm blades which slidably overlap each other and are held by the other of said front and rear surfaces of said base plate, wherein a variable-sized aperture is formed by said pair of diaphragm blades, the size of said variable-size aperture changing in accordance with relative movement between said pair of diaphragm blades;

at least one ND filter which is fixed to at least one of said pair of diaphragm blades so as to cover said image-taking aperture; and

first and second actuators fixed to said base plate on opposite sides of said plane portion of said base plate, respectively;

wherein said first actuator moves said pair of diaphragm blades in opposite directions relative to each other to adjust said size of said variable-sized aperture; and

wherein said second actuator moves said filter supporting plate so that said two apertures are selectively positioned to align with said image-forming aperture.

16. (Original) The diaphragm unit according to claim 15, wherein said ND filter comprises spectral transmittance characteristics wherein a transmittance of said ND filter for light in an infrared region is one of substantially identical to and less than a transmittance of said ND filter for visible light.

17. (Original) The diaphragm unit according to claim 15, wherein said ND filter comprises spectral transmittance characteristics so as to filter out light in an infrared region.

18. (Currently Amended) The diaphragm unit according to claim 15, further comprising:

a plane-parallel plate which is fixed to said filter supporting plate so as to cover the other of said two apertures,

wherein said second actuator moves said filter supporting plate so that said infrared absorbing filter is positioned in front of a color image pick-up device of said CCTV surveillance camera during an image-forming operation in the daytime, and so that said plane-parallel plate is positioned in front of said color-image pick-up device of said CCTV surveillance camera during an image-forming operation at nighttime.

19. (Currently Amended) The diaphragm unit according to claim 15, further comprising:

a latch mechanism which positions said filter supporting plate in each of first and second positions;

wherein one of said two apertures is positioned to align with said image-forming aperture when said filter supporting plate is positioned in said first position, and

wherein the other of said two apertures is positioned to align with said image-forming aperture when said filter supporting plate is positioned in said second position.

20. (Currently Amended) The diaphragm ~~device~~ unit according to claim 16, wherein said infrared region ranges from approximately 700 to 1000 nanometers.

21. (Original) The diaphragm unit according to claim 15, wherein a surface of said ND filter has a reflectivity which is one of equal to and less than approximately two percent.

22. (Original) The diaphragm unit according to claim 15, wherein said ND filter is made of a resin base on which multi-metal layers are formed by evaporating a metal onto said resin base.

23. (Original) The diaphragm device according to claim 1, wherein said lens barrel is integrally fixed to a camera body of said CCTV surveillance camera.

24. (Currently Amended) The diaphragm device according to claim 2, wherein said base plate comprises a plurality of supporting protrusions which are formed on each of front-~~an~~ and rear surface thereof to support and guide each of said diaphragm and said filter supporting plate in a longitudinal direction of said base plate.

25. (Original) The diaphragm device according to claim 1, wherein said diaphragm driver comprises a galvanometer type actuator.

26. (Original) The diaphragm device according to claim 1, wherein said filter driver comprises a galvanometer type actuator.

27. (Currently Amended) A diaphragm device, comprising:
a plurality of diaphragm blades which slidably overlap each other to form a variable-sized aperture;
a filter supporting plate having an infrared absorbing filter;
a base plate which supports said plurality of diaphragm blades and said filter supporting plate on opposite surfaces of said base plate, respectively;

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a first driver for moving said plurality of diaphragm blades on said base plate to adjust a size of said variable-sized aperture; and

a second driver for moving said filter supporting plate on said base plate so that said infrared absorbing filter is selectively inserted into and retracted from an optical path in said lens barrel;

wherein said first driver and said second driver are positioned ~~in~~ on opposite sides of said base plate.

28. (New) A diaphragm device of a lens for a CCTV camera, comprising:

a lens barrel;

a diaphragm;

a base plate which supports said diaphragm;

a diaphragm driver for driving said diaphragm to adjust a size of an aperture formed by said diaphragm;

an optical filter; and

a filter driver for moving said optical filter into and out of an optical path of said lens;

wherein said diaphragm is provided on a first side of said base plate and said optical filter is provided on a second side of said base plate which is opposite to said first side of said base plate;

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wherein said diaphragm is driven by said diaphragm driver independently of the moving of said optical filter by said filter driver; and

wherein said diaphragm, said base plate, said diaphragm driver, said optical filter, and said filter driver are provided in said lens barrel.